ANATOMY: An Analytical Model of Memory Systems

Quad-Core Workloads
Q1:(462,459,470,433),
Q2:(429,183,462,459),
Q3:(429,462,471,464),
Q4:(470,437,187,300),
Q5:(462,470,473,300),
Q6:(459,464,183,433),
Q7:(410,464,445,433),
Q8:(462,459,445,410),
Q9:(429,456,450,459),
Q10:(181,186,300,177),
Q11:(168,401,435,464),
Q12:(434,435,437,171),
Q13:(444,445,459,462),
Q14:(401,410,178,177)
Q15:(300,254,255,470),
Q16:(171,181,464,465),
Q17:(464,450,465,473)
Q18:(453,433,458,410),
Q19:(462,471,254,186),
Q20:(462,191,433,437),
Q21:(401,473,435,177),
Q22:(416,429,454,175)
Q23:(254,172,178,188)
Eight Core Workloads
E1:(462,459,433,456,464,473,450,445),
E2:(300,456,470,179,464,473,450,445),
E3:(187,172,173,410,470,433,444,177),
E4:(434,435,450,453,462,471,164,186),
E5:(416,473,401,172,177,178,179,435),
E6:(437,459,445,454,456,465,171,197),
E7:(183,179,433,454,464,435,444,458)
E8:(183,462,450,471,473,433,254,168)
E9:(300,173,178,187,188,191,410,171)
E10:(470,177,168,434,410,172,464,171)
E11:(459,473,444,453,450,197,175,164)
E12:(471,462,186,254,465,445,410,179)
E13:(187,470,401,416,433,437,456,454)
E14:(300,458,462,470,433,172,191,471)
E15:(183,473,401,435,188,434,164,427)
Sixteen Core Workloads
S1:(462,459,433,456,464,473,450,445,453,179,183,168,416,434,444,191)
S2:(435,465,471,164,186,434,416,256,172,177,178,437,454,171,197,458)
S3:(462,473,254,168,183,453,300,173,187,178,188,410,171,434,470,191)
S4:(470,177,464,171,172,168,434,410,175,164,444,450,254,465,179,471)
S5:(410,433,189,187,177,173,300,255,254,471,458,456,454,437,444,434)
S6:(191,189,177,183,179,168,470,164,470,464,459,450,435,256,416,445)

Table 1: Workloads

1. Appendix

The workload mixes used in our studies are presented in Table 1. The table specifies the SPEC 2000/2006 benchmark number (e.g: 462 denotes 462.libquantum in the SPEC 2006 suite) used in each workload. The position of the benchmark number in each array denotes which core the benchmark was run on (e.g: In the quad-core workload mix Q1, 462 was run on core-0, 459 on core-1 and so on).